

We Claim:

- 09065672.042398
1. A purified polynucleotide or fragment thereof derived from a PS128
5 gene, wherein said polynucleotide is capable of selectively hybridizing to the nucleic
acid of said PS128 gene and has at least 50% identity with a sequence selected from
the group consisting of (a) SEQUENCE ID NO 1, SEQUENCE ID NO 3,
SEQUENCE ID NO 4, SEQUENCE ID NO 5, and complements thereof, and (b)
10 fragments of SEQUENCE ID NO 1, SEQUENCE ID NO 2, and SEQUENCE ID
NO 3.
2. The purified polynucleotide of claim 1, wherein said polynucleotide
is produced by recombinant techniques.
- 15 3. The purified polynucleotide of claim 1, wherein said polynucleotide
is produced by synthetic techniques.
- 20 4. The purified polynucleotide of claim 1, wherein said polynucleotide
comprises a sequence encoding at least one PS128 epitope.
5. A recombinant expression system comprising a nucleic acid sequence
that includes an open reading frame derived from PS128 operably linked to a control
sequence compatible with a desired host, wherein said nucleic acid sequence has at
least 50% identity with a sequence selected from the group consisting of
SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3,
SEQUENCE ID NO 4, SEQUENCE ID NO 5, and fragments or complements
thereof.
- 30 6. A cell transfected with the recombinant expression system of claim 5.
7. A PS128 polypeptide having at least 50% identity with an amino acid
sequence selected from the group consisting of SEQUENCE ID NO 12,
SEQUENCE ID NO 13, SEQUENCE ID NO 14, and fragments thereof.
- gene
PS
a

-94-

8. The polypeptide of claim 7, wherein said polypeptide is produced by recombinant techniques.

5 9. The polypeptide of claim 7, wherein said polypeptide is produced by synthetic techniques.

10. An antibody which specifically binds to at least one PS128 epitope, wherein said PS128 epitope is derived from an amino acid sequence having at least 50% identity with an amino acid sequence selected from the group consisting of
10 SEQUENCE ID NO 12, SEQUENCE ID NO 13, SEQUENCE ID NO 14, and fragments thereof.

11. A cell transfected with a nucleic acid sequence encoding at least one PS128 epitope, wherein said nucleic acid sequence is selected from the group
15 consisting of SEQUENCE ID NO 1, SEQUENCE ID NO 2, SEQUENCE ID NO 3, SEQUENCE ID NO 4, SEQUENCE ID NO 5, and fragments or complements thereof.

12. A method for producing a polypeptide comprising at least one PS128 epitope, said method comprising incubating host cells that have been transfected with an expression vector containing a polynucleotide sequence encoding a polypeptide, wherein said polypeptide comprises an amino acid sequence having at least 60% identity with an amino acid sequence selected from the group consisting of
25 SEQUENCE ID NO 12, SEQUENCE ID NO 13, SEQUENCE ID NO 14, and fragments thereof.

13. A method for producing antibodies which specifically bind to PS128 antigen, said method comprising administering to an individual an isolated immunogenic polypeptide or fragment thereof in an amount sufficient to elicit an
30 immune response, wherein said immunogenic polypeptide comprises at least one PS128 epitope and has at least 50% identity with a sequence selected from the group consisting of SEQUENCE ID NO 12, SEQUENCE ID NO 13, SEQUENCE ID NO 14, and fragments thereof.

-95-

14. A method for producing antibodies which specifically bind to PS128 antigen, said method comprising administering to an individual a plasmid comprising a polynucleotide sequence which encodes at least one PS128 epitope derived from a polypeptide having an amino acid sequence selected from the group consisting of SEQUENCE ID NO 12, SEQUENCE ID NO 13, SEQUENCE ID NO 14, and fragments thereof.

15. A composition of matter comprising a PS128 polynucleotide or fragment thereof, wherein said polynucleotide has at least 50% identity with a sequence selected from the group consisting of (a) SEQUENCE ID NO 1, SEQUENCE ID NO 3, SEQUENCE ID NO 4, SEQUENCE ID NO 5, and complements thereof, and (b) fragments of SEQUENCE ID NO 1, SEQUENCE ID NO 2, and SEQUENCE ID NO 3.

16. A composition of matter comprising a polypeptide containing at least one PS128 epitope, wherein said polypeptide has at least 50% identity with a sequence selected from the group consisting of SEQUENCE ID NO 12, SEQUENCE ID NO 13, SEQUENCE ID NO 14, and fragments thereof.

17. A gene, or fragment thereof, which codes for a PS128 protein which comprises an amino acid sequence having at least 50% identity to SEQUENCE ID NO 12.

18. A gene, or fragment thereof, comprising DNA having at least 50% identity with SEQUENCE ID NO 4 or SEQUENCE ID NO 5.

add D1

add M5

add C1